

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A four branch differential transmission system comprising:

a first shaft [[(10)]] and a second shaft [[(12)]], which constitute the input and output shafts[[.]];

a third shaft [[(42)]] connected to a first variator (44, 46) arranged to increase or decrease its speed and;

a fourth shaft [[(48)]] connected to a second variator (50, 52) arranged to increase or decrease its speed[[.]];

the four shafts (10, 12, 42, 48) being connected together by a spur gear compound epicyclic gearset including a plurality of toothed gearwheels,

~~characterised in that~~ wherein the compound epicyclic gearset comprises first and second epicyclic gearsets, the first epicyclic gearset being of positive type and comprising a first sun wheel [[(40)]] and a second sun wheel [[(28)]] in mesh with a respective set of first and second planet wheels (21; 26), each first planet wheel [[(21)]] being connected to rotate with a respective second planet wheel [[(26)]] about a respective common planet shaft [[(24)]], the planet shafts [[(24)]] being connected to a common planet carrier [[(22)]], the second epicyclic gearset being of negative type and comprising the first sun wheel [[(40)]] and a third sun wheel [[(38)]], the third sun wheel being in mesh with a set of third planet wheels [[(39)]], each of which is connected to rotate with a respective first and second planet wheel about a respective planet shaft [[(24)]], the first and third planet wheels (21; 39) or the first

and second planet wheels ~~(21; 26)~~ of each connected set of planet wheels being of different diameter and being connected together to constitute a stepped composite planet wheel.

2. (Currently Amended) ~~[[A]]~~The transmission system as claimed in Claim 1 ~~in which wherein~~ the set of third planet wheels ~~[(38)]~~ is in mesh with a set of fourth planet wheels ~~[(32)]~~ mounted to rotate about respective planet shafts ~~[(34)]~~ connected to the common carrier ~~[(22)]~~, each fourth planet wheel ~~[(32)]~~ being in mesh with a respective third planet wheel ~~[(39)]~~, whereby the third sun wheel ~~[(38)]~~ is in indirect mesh with the third planet wheels ~~[(39)]~~ and rotates in the same direction as the third planet wheels.

3. (Currently Amended) ~~[[A]]~~The transmission system as claimed in Claim 1 ~~[[or 2]]~~ ~~in which wherein~~ the common carrier ~~[(22)]~~ is connected to one of the input and output shafts ~~(10, 12)~~.

4. (Currently Amended) ~~[[A]]~~The transmission system as claimed in ~~any one of the preceding claims~~ Claim 1 ~~in which wherein~~ the common carrier ~~[(22)]~~ at least partially surrounds the first and second epicyclic gearsets.

5. (Currently Amended) ~~[[A]]~~The transmission system as claimed in ~~any one of Claim[[s]] 1 [[to 3]]~~ ~~in which wherein~~ the first sun wheel ~~[(40)]~~ is connected to one of the input and output shafts ~~(10, 12)~~.

6. (Currently Amended) [[A]]The transmission system as claimed in any one of the preceding claims Claim 1 in which wherein the input and output shafts-
~~(10, 12)~~ are coaxial.

7. (Currently Amended) [[A]]The transmission system as claimed in any one of the preceding claims Claim 1 in which wherein the variators comprise electric motor/generators ~~(44, 46; 50, 52)~~, preferable arranged coaxially.

8. (Currently Amended) [[A]]The transmission system as claimed in Claim 7 in which wherein the stator connections of the two motor/generators ~~(44, 46; 50, 52)~~ are connected together via one or more controllers ~~(51, 53)~~ which may be selectively operated to vary the electrical power transmitted between the two motor/generators and thus to vary the transmission ratio of the transmission system.

9. (Currently Amended) [[A]]The transmission system as claimed in any one of the preceding claims- Claim 1 including further comprising:
an outer casing, which is divided into a dry space ~~[(d54)]~~, in which the first and second variators ~~(44, 46; 50, 52)~~ are accommodated, and an oil lubricated space ~~[(56)]~~, in which the compound epicyclic gearset is accommodated.